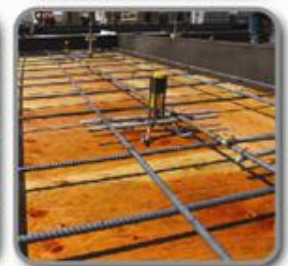


I-215 East; near 3900 South Precast Concrete Pavement Panels Construction Overview

John Montoya, P.E.
UDOT Resident Engineer

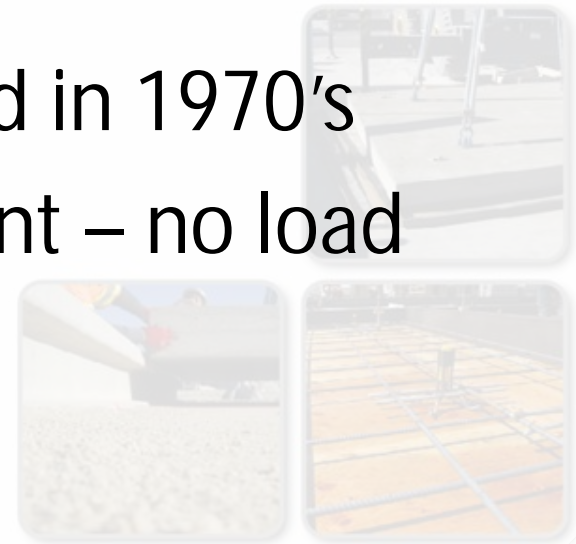
Sam Donaldson
Kilgore Contracting





Existing Conditions

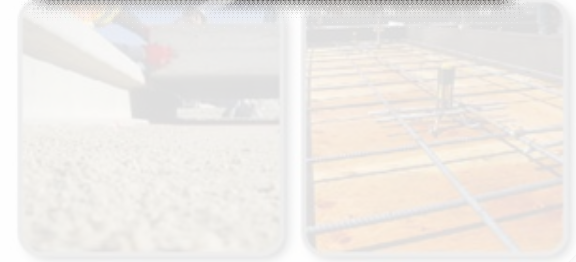
- I-215 Major belt route for Salt Lake City
- Major route for SB truck traffic I-80 to I-15
- 68,000 AADT
- 3 Lanes
- Concrete pavement constructed in 1970's
- Unreinforced concrete pavement – no load transfer bars





Traffic Restrictions

- Take one lane at 7:00 p.m.
- Take second lane at 10:00 p.m.
- Open first lane at 5:30 a.m.
- Open second lane at 6:00 a.m.
- Total work time 11 hours





Project Scope

- Replace forty nine 12'x12' panels in lane #3 and seven 6'x12' panels on ramp
- Total project length 600 ft.
- Minimize traffic delays
- Maintain high level of quality product





Schedule

Approximate Time	Activity
7:00 p.m. – 7:30 p.m.	Close Ramp and Lane #3, Place Barrier
7:30 p.m. – 9:00 p.m.	Remove Existing Panels
8:30 p.m. – 10:00 p.m.	Prepare Grade
9:30 p.m. – 10:00 p.m.	Set Panel #1
10:00 p.m. – 10:30 p.m.	Set Panel #2
10:30 p.m. – 11:00 p.m.	Set Panel #3
11:00 p.m. – 3:00 a.m.	Set 5 Panels
10:30 p.m. – 3:30 a.m.	Urethane Injection
3:30 a.m. – 6:00 a.m.	Stripe, Clean Up, Remove Barrier
6:00 a.m.	Open Travel Lane



Friday, June 3, 2011

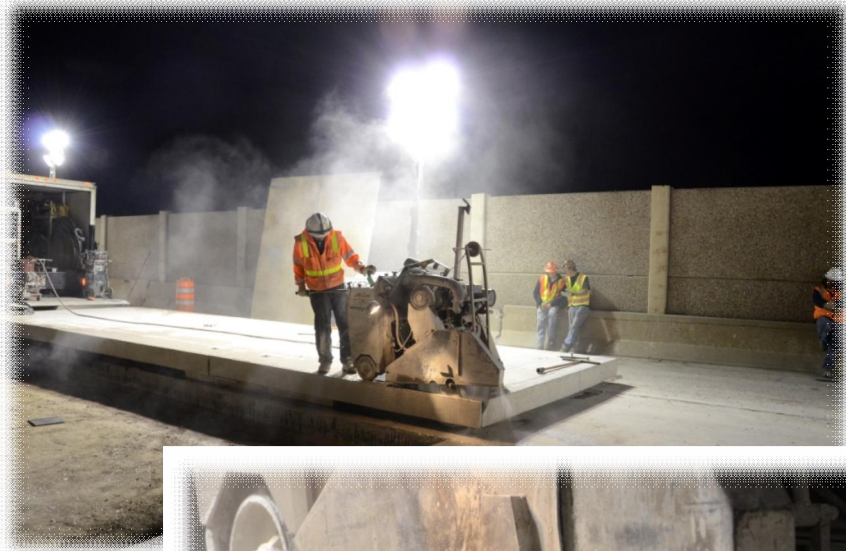
- Movable barrier – learning curve
- Placed 3 panels
- Used template
- String line and measured to grade
- Saw cut both longitudinal joints
- Asphalt plug at end of night
- Cementitious grout used to fill in gaps





Saturday, June 4, 2011

- Placed 9 panels
- Open to traffic by 9:00 a.m. (Sunday morning)
- Gap from previous night too large
 - Decision to cut panels
 - Cut 1" to 1 ½" "pie shaped" taper
 - Every other panel cut





Sunday, June 5, 2011

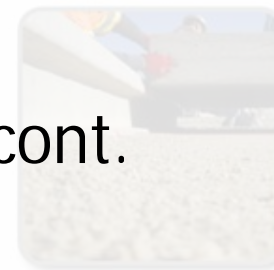
- Placed 6 panels
- Panels pre-cut in precast yard
- Gap issues
- Uneven longitudinal joint
- Urethane too thick
 - 1" to 1 ½" thick





Monday, June 6, 2011

- Placed 6 panels
- Screed modified
- Panel hit in middle
- Panels placed without cutting
- Crane placed on new panels
 - Prior to urethane
 - Panels placed as demo/grade prep cont.





Lessons Learned

- Can't ignore radius of roadway
 - Cast radius in?
 - Pre-cut?
- Panels not perfect/each panel varies slightly
 - Tighter tolerances for panels?
- Cast panels with angled edges
- Control subgrade disturbance





Lessons Learned

- Work in multiple lanes can be done simultaneously
- Work could proceed from each direction or multiple directions
- Be prepared with HMA





Questions?

